

WHAT IS CLAIMED IS:

1. A TSSI monitoring device for monitoring a correct time slot sequence in a time/space switching network for a time or space allocation of data channels to be switched, comprising:

5 a TSSI insertion mechanism for inserting a TSSI monitoring value into a predetermined data channel of successive frames to be switched, wherein said TSSI monitoring value for each frame is incremented or decremented by a predetermined value; and

10 a difference forming mechanism for forming a difference of data contents of said predetermined data channel for immediately successive frames to be switched by said time/space switching network, wherein said difference is equal to said predetermined value for a correct time slot sequence.

15 2. The TSSI monitoring device according to claim 1, further comprising an error counter for counting TSSI errors for a lack of agreement between said formed difference and said predetermined value.

20 3. The TSSI monitoring device according to claim 1, wherein said predetermined value is equal to 1 and is derived from a counter.

4. The TSSI monitoring device according to claim 1, wherein said difference forming mechanism comprises:  
a delay for delaying a predetermined data channel to be switched by one frame;  
25 a subtractor for determining a subtraction result from a data content of a delayed data channel and a data content of an undelayed data channel; and  
a comparator unit for comparing said subtraction result with said predetermined value.

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5. The TSSI monitoring device according to claim 4, wherein said delay comprises at least one speech memory of said time/space switching network.

6. The TSSI monitoring device according to claim 1, wherein said TSSI insertion mechanism comprises a plurality of TSSI insertion units that are respectively allocated to an input switching network line.

7. The TSSI monitoring device according to claim 1, wherein said difference forming mechanism comprises a plurality of difference forming units that are respectively allocated to two output switching network lines.

8. The TSSI monitoring device according to claim 2, wherein said error counter comprises a plurality of error counting units that are respectively allocated to a difference forming unit.

9. The TSSI monitoring device according to claim 1, wherein said TSSI insertion mechanism is fashioned in an equalizer for producing a plurality of synchronous frames from non-synchronous frames.

10. The TSSI monitoring device according to claim 1, wherein said predetermined data channel to be switched represents a test channel.

~~11.~~ A method for monitoring a correct time slot sequence in a time/space switching network for a time or space allocation of data channels to be switched, comprising the steps of:

inserting a TSSI monitoring value into a predetermined data channel of successive frames to be switched, wherein said TSSI monitoring value for each frame is incremented or decremented by a predetermined value;

time or space allocating said data channels to be switched in said time/space switching network;

forming a difference of data contents of said data channel to be switched by said time/space switching network for immediately successive frames; and outputting an error value when said difference is not equal to said predetermined value.

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12. The method according to claim 11, further comprising the step of: incrementing an error counter dependent on said output error value.

13. The method according to claim 11, wherein said TSSI monitoring value is incremented by a predetermined value derived from a counter.

14. The method according to claim 11, wherein said step of forming a difference of data contents of said data channel comprises the steps of: delaying said predetermined data channel to be switched by one frame; determining a subtraction result from a data content of said delayed data channel and a data content of an undelayed data channel; and comparing said identified subtraction result to said predetermined value.

15. The method according to patent claim 14, wherein said step of delaying said predetermined data channel is implemented in a speech memory of said time/space switching network.

16. The method according to claim 11, wherein said step of inserting a TSSI monitoring value is implemented for a plurality of input switching network lines.

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17. The method according to claim 11, wherein said step of forming a difference of data contents of said data channel is implemented for a plurality of respectively two output switching network lines.

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18. The method according to claim 11, wherein said step of inserting a TSSI monitoring value takes place in a test channel.

19. The method according to claim 13 wherein said predetermined value is one.

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